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(54) **PERSONAL AIRCRAFT**

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(57) **ABSTRACT**

A safe, quiet, easy to control, efficient, and compact aircraft configuration is enabled through the combination of multiple vertical lift rotors, tandem wings, and forward thrust propellers. The vertical lift rotors, in combination with a front and rear wing, permits a balancing of the center of lift with the center of gravity for both vertical and horizontal flight. This wing and multiple rotor system has the ability to tolerate a relatively large variation of the payload weight for hover, transition, or cruise flight while also providing vertical thrust redundancy. The propulsion system uses multiple lift rotors and forward thrust propellers of a small enough size to be shielded from potential blade strike and provide increased perceived and real safety to the passengers. Using multiple independent rotors provides redundancy and the elimination of single point failure modes that can make the vehicle non-operable in flight.